



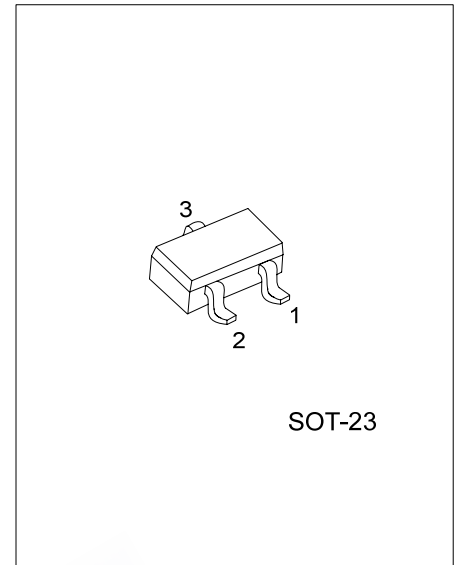
MMBTH10

NPN SILICON TRANSISTOR

RF TRANSISTOR

DESCRIPTION

The UTC **MMBTH10** is designed for using as VHF and UHF oscillators and VHF Mixer in a tuner of a TV receiver.



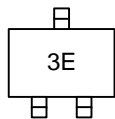
*Pb-free plating product number: MMBTH10L

ORDERING INFORMATION

Order Number		Package	Pin Assignment			Packing
Normal	Lead Free Plating		1	2	3	
MMBTH10-x-AE3-C-R	MMBTH10L-x-AE3-C-R	SOT-23	E	B	C	Tape Reel

<p>MMBTH10L-x-AE3-C-R</p> <p>(1) Packing Type (2) Pin Assignment (3) Package Type (4) Rank (5) Lead Plating</p>	<p>(1) T: Tube (2) refer to Pin Assignment (3) AE3: SOT-23 (4) x: refer to Classification of h_{FE} (5) L: Lead Free Plating, Blank: Pb/Sn</p>
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MARKING



MMBTH10

NPN SILICON TRANSISTOR

■ ABSOLUTE MAXIMUM RATING (Ta=25°C)

PARAMETER	SYMBOL	RATINGS	UNIT
Collector-base voltage	V _{CB0}	30	V
Collector-emitter voltage	V _{CEO}	25	V
Emitter-base voltage	V _{EBO}	3	V
Total Power Dissipation	P _C	225	mW
Collector current	I _C	50	mA
Junction Temperature	T _J	150	°C
Storage Temperature	T _{STG}	-55 ~ +150	°C

Note Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

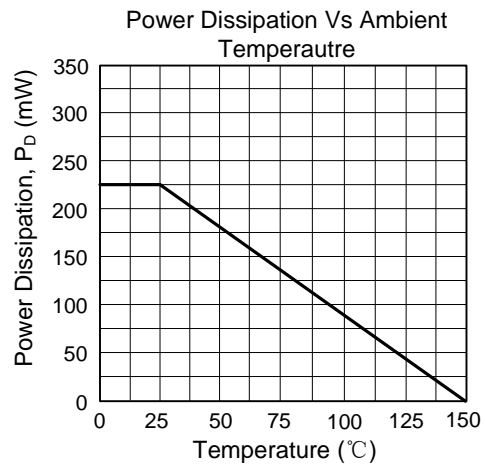
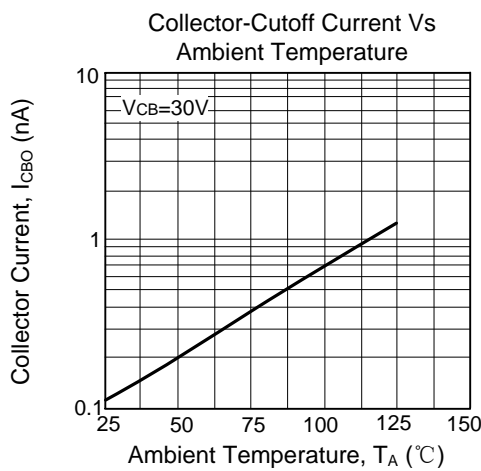
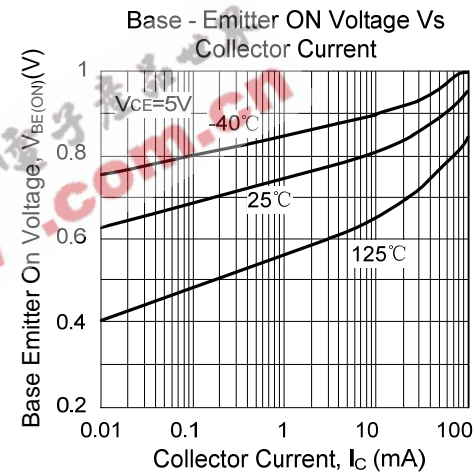
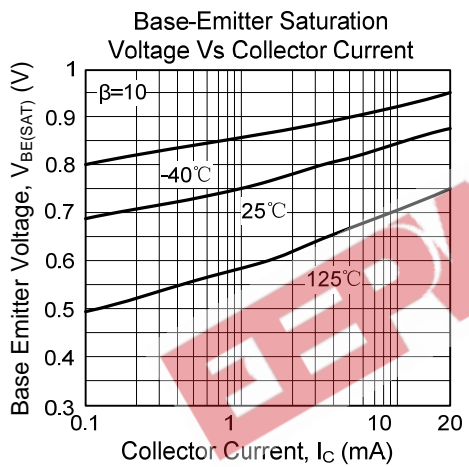
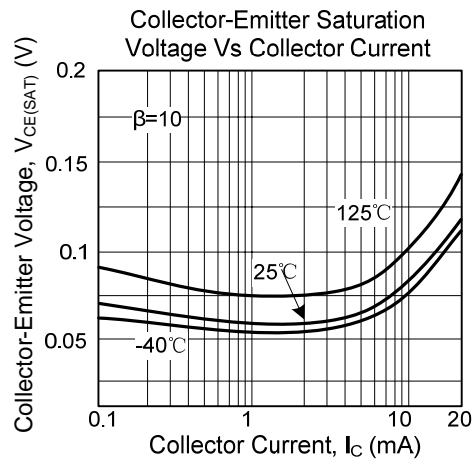
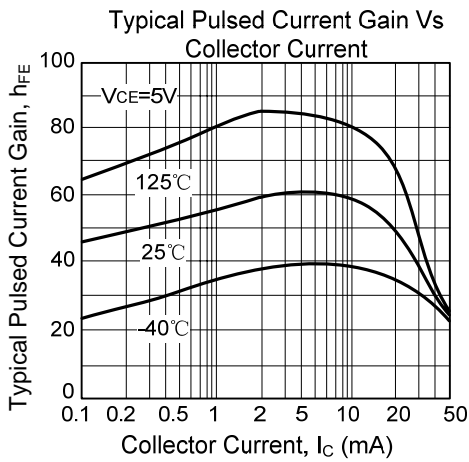
■ ELECTRICAL CHARACTERISTICS (Ta=25°C, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Base Breakdown Voltage	BV _{CB0}	I _C =100μA	30			V
Collector-Emitter Breakdown Voltage	BV _{CEO}	I _C =1mA	25			V
Emitter-Base Breakdown Voltage	BV _{EBO}	I _E =10μA	3			V
Collector-Emitter Saturation Voltage	V _{CE(SAT)}	I _C =4mA, I _B =400μA			500	mV
Base-Emitter on Voltage	V _{BE(ON)}	V _{CE} =10V, I _C =4mA			950	mV
Collector Cut-off Current	I _{CB0}	V _{CB} =25V			100	nA
Emitter Cut-off Current	I _{EBO}	V _{EB} =2V			100	nA
DC Current Gain	h _{FE}	V _{CE} =10V, I _C =4mA	60			
Output Capacitance	C _{ob}	V _{CB} =10V, f=1MHz			0.7	pF
Current Gain Bandwidth Product	f _T	V _{CE} =10V, I _C =4mA, f=100MHz	650			MHz

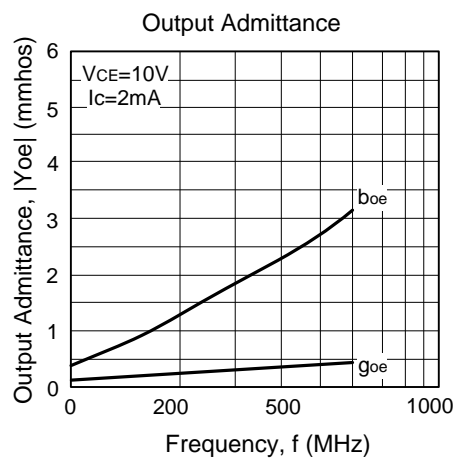
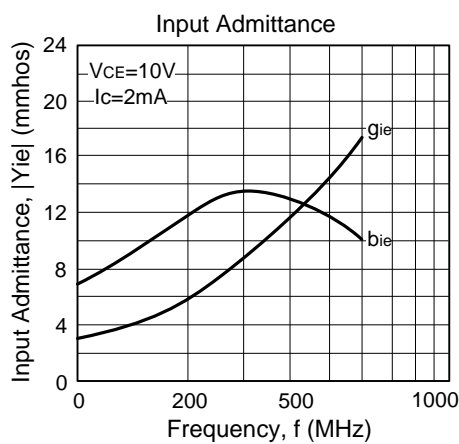
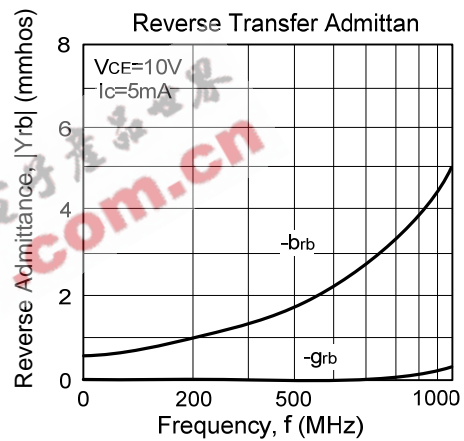
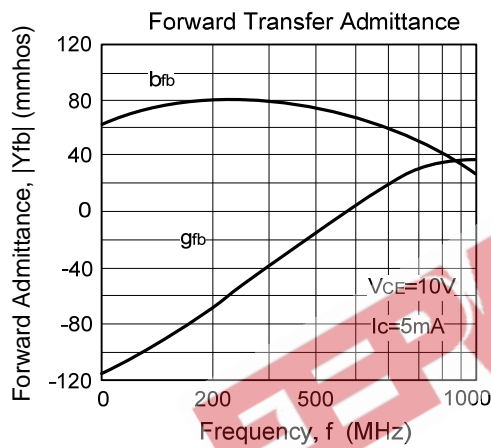
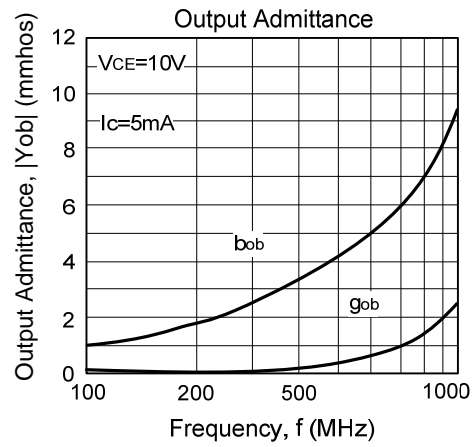
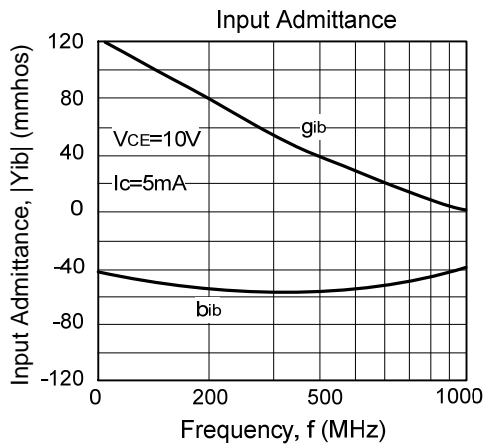
■ CLASSIFICATION OF h_{FE}

RANK	A	B	C
RANGE	60-100	90-130	120-200

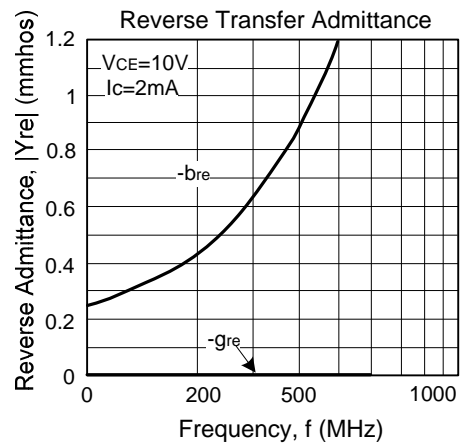
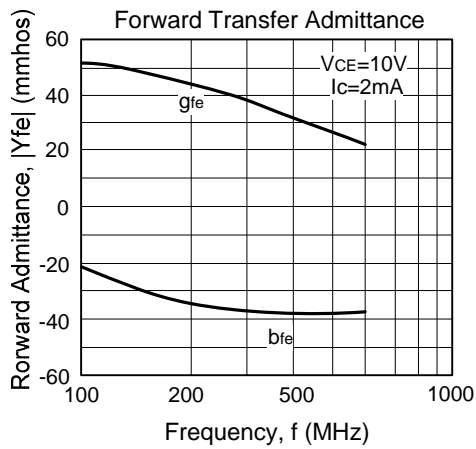
■ TYPICAL CHARACTERISTICS



■ TYPICAL CHARACTERISTICS(Cont.)



■ TYPICAL CHARACTERISTICS(Cont.)



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